

## NEW SPECIES OF ERIOGONUM FROM UTAH

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During the summer months since 1959 extensive field trips have been taken into the Intermountain Region in connection with the Intermountain Flora Project under the direction of Arthur Cronquist of the New York Botanical Garden. Several new and interesting plants have been found (Cronquist 1963a; b; 1964; Holmgren, 1967; Reveal, 1965; 1966a; b; c; 1967; 1968; a; b). This report is another in the series of contributions in which the various undescribed species are proposed.

The author is grateful to Arthur Cronquist for the opportunity to carry out field and herbarium studies on the Intermountain Region and adjacent areas. This work was largely supported by his National Science Foundation grants from 1964 to 1967, and lead to the discovery of the following new species. The assistance of Noel H. Holmgren of the New York Botanical Garden in the field during those years is appreciated. C. V. Morton assisted the author with the preparation of the Latin descriptions. The United States National Herbarium and the Smithsonian Institution sponsored the author's Predoctoral Internship program in Washington, D.C., from September 1966 to February 1967 where this paper was initially prepared. The illustrations were prepared by Mrs. Twila Davis Bird, formerly a student at Utah State University, under the direction of Arthur H. Holmgren, Curator of the Intermountain Herbarium. Up to thirty-five isotypes of the proposed taxa have been distributed from Utah State University.

**Eriogonum cronquistii** Reveal, sp. nov. Planta perennis herbacea implexa, 1–3 dm diam.; caules (0.7)1–1.5(2) dm alti, basi per 1–4 cm foliosi; laminae foliorum ellipticae, 0.5–2 cm longae, 4–10 mm latae, margine crenulatae et crispatae, subtus albo-tomentosae, supra subglabrae et virides, petiolis 3–8 mm longis, tomentosis, basi expansa petioli 1–1.5 mm lati; caules glabri, basi excepta, ca. 1 dm longi, bracteis 1 mm longis, extra glabris, intus tomentosis; inflorescentiae subcapitata vel cymosa, 1–7 cm longae, glabrae; involucria turbinata, 3 mm longa, sessilia, extra et intus glabra, 5-lobata, bracteolis filiformibus, 2 mm longis, pedicellis 2.5–3 mm longis, glabris; perianthia alba, (1.5)2–3 mm longa, extra glabra, intus minute glandulosa, segmentis similibus, oblanceolatis; stamina 2.5–4 mm longa, filamentis basi pilosis, antheris 0.3 mm longis; achaenia brunnea, 2–2.5 mm longa.

Herbaceous perennials from matted, highly branched and spreading, woody caudices, plants (0.7)1–1.5(2) dm high; leaves basal and sheathing up the stems 1–4 cm, leaf-blades elliptical with crenulate margins, 0.5–2 cm long, 4–10 mm wide, densely white-tomentose below, subglabrate and green above, the petioles 3–8 mm long, tomentose, the ex-



FIG. 1. *Eriogonum cronquistii*. Habit sketch showing the erect stems and leafy bases with an enlargement of the inflorescence showing the clustered involucre on short branches and the arrangement of the leaves on the base of the stem.

panded petiole bases 1–1.5 mm wide; stems glabrous and glaucous except for the tomentose bases among the leaves, up to 1 dm long; bracts scale-like, ternate, 1 mm long, glabrous without, tomentose within, the acute apices widening to connate bases; inflorescences open cymes up to 7 cm long, glabrous, dichotomously or trichotomously branched, subcapitate when immature; involucre sessile, 3 mm long, turbinate, glabrous within and without, angled with 5 ridges running down from the 5 acute teeth which form lobes  $\frac{1}{3}$  the length of the tubes, the teeth with membranaceous margins, the bractlets linear and thread-like, 2 mm long, the pedicels

2.5–3 mm long, glabrous; perianth white, (1.5)2–3 mm long, glabrous except for minute glands within along the midribs, calyx-segments  $\pm$  equal, the outer segments oblanceolate with rounded apices, the inner segments slightly narrower and shorter; stamens 2.5–4 mm long, the filaments pilose at the base, the anthers 0.3 mm long, reddish; achenes brown, 2–2.5 mm long, the subglobose bases tapering to smooth 3-angled beaks.  $n = 20$ .

Specimens examined. Utah, Garfield Co.: Loose decomposed granite talus slopes on the west side of Bull Mt., Henry Mts., Sec 6, T31S, R11E, 8,300 ft., *Holmgren & Reveal 3010* (holotype-UTC), Aug. 14, 1967; Bull Mt., *Cronquist & Holmgren 9442* (NY). Fig. 1.

This new species resembles *E. batemanii* M. E. Jones in several of its features and especially so in its glabrous cymose inflorescences, elliptic basal leaves and in flower and involucre size. Yet the two species may be distinguished by the crenulate leaf-margins of *E. cronquistii* and the shorter leaves than those of *E. batemanii* which tend to be 2–3 cm long. Also *E. cronquistii* differs in its loosely matted and spreading habit which is unlike the more compact and not at all spreading habit of *E. batemanii*. In addition, *E. batemanii* is 2–4 dm high while the new species is rarely 2 dm high. In their ecology, the two species differ greatly. *E. cronquistii* is the only species in the subgenus *Eucycla* (Nutt.) Kuntze that grows strictly on talus slopes. The type area is a rock slide where the angle of repose is so great that the slightest disturbance can cause the talus to slide. In collecting specimens, the plants were found to have long creeping caudices—apparently a result of the habitat—and an entire plant is often up to two feet down slope from the point of primary root contact with the soil. On the other hand, *E. batemanii* is restricted to the heavy gumbo clay hills throughout much of the Uinta Basin and Grand Valley south onto the San Rafael Swells and the lower slopes of the Henry Mountains. *Eriogonum batemanii* never attains the elevations of *E. cronquistii* which grows in the rock slide from about 8100 feet to about 9250 feet.

It is a pleasure to name this new species in honor of Arthur Cronquist, Senior Curator of the New York Botanical Garden, who brought this plant to my attention.

***Eriogonum humivagans*** Reveal, sp. nov. Herba perennis, 2–3 dm alta; laminae foliorum oblanceolatae, 1.5–3 cm longae, 2–5(7) mm latae, basiles, subtus albo-tomentosae, supra subglabrae et virides, petiolis 5–10 (12) mm longis, tomentosus, basi expansa petioli, 1.5–2 mm lati; caules glabri, ca. 1 dm longi, bracteis 2–3 mm longis, extra glabris, intus tomentosus; inflorescentiae cymosa, stricta; involucre turbinata, 3–4 mm longae, 2–2.5 mm latae, sessilia, extra glabri, intus sparsi tomentosa, 5-lobata, bracteolis linearis, 3 mm longis, pedicellis 3.5–5 mm longis, glabris; periantha alba, costa brunnea, 3–3.5 mm longa, extra glabra, intus minute glandulosa, segmentis similibus, obovatis; stamina 3–5 mm

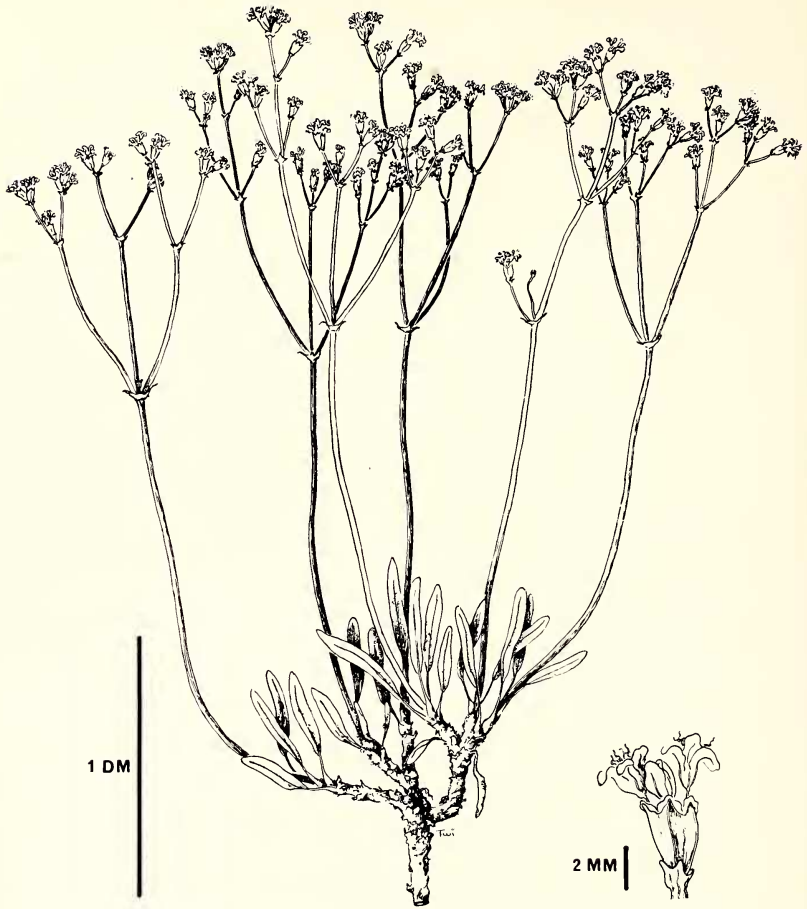


FIG. 2. *Eriogonum humivagans*. Habit sketch showing the general aspect of the species and a single enlarged involucre with exerted flowers.

longa, filamentis basi pilosis, antheris 0.4–0.5 mm longis; achaenia brunnea, 2.5–3 mm longa.

Herbaceous perennials from branched woody caudices, plants 2–3 dm high; leaves strictly basal, leaf-blades 1.5–3 cm long, 2–5(7) mm wide, oblanceolate, densely white-tomentose below, sparsely tomentose and green above, the petioles 5–10(12) mm long, tomentose, the expanding petiole-bases 1.5–2 mm wide, tomentose within and without; stems glabrous except at the base among the leaves, the stems spreading outward from the 5 acute teeth which form lobes  $\frac{1}{4}$  the length of the tubes, bracts scale-like, ternate, 2–3 mm long, tannish-green to brown and glabrous without, arachnoid-pubescent within, the acute apices widening to connate bases; inflorescences open, cymose, somewhat narrow and strict, trichotomously branched, glabrous; involucre sessile, turbinate, 3–4 mm long, 2–2.5 mm wide, glabrous without, sparsely pubescent in the center of the lobes within, angled with 5 distinct ribs running down-

ward from the 5 acute teeth which form lobes  $\frac{1}{4}$  the length of the tubes, the teeth with membranaceous margins, the bractlets linear, 3 mm long, the pedicels 2.5–4 mm long, glabrous; perianth white with reddish-brown midribs and greenish-brown bases, 3–3.5 mm long, glabrous except for minute tack-shaped glands along the midribs within, calyx-segments similar, obovate, connate less than  $\frac{1}{5}$  its length; stamens 3–5 mm long, the filaments pilose at the base, the anthers 0.4–0.5 mm long, white to red; achenes light brown, 2.5–3 mm long, the subglobose bases tapering to 3-angled, slightly roughened beaks.  $n = 20$ .

Specimens examined. Utah, San Juan Co.: On low clay hills and banks, 13.5 mi E of Monticello, Sec 7, T34s, R26E, 6,800 ft, *Holmgren & Reveal 3001* (holotype-UTC); 10 mi E of Monticello, *Goodman 5999* (UC); 13 mi E of Monticello, *Waterfall 15115* (UC, US). Fig. 2.

*Eriogonum humivagans* is a member of a difficult group of species that has suffered considerable misinterpretation in various manuals and floras, and to some degree, also in Stokes (1936). This species, as well as the following one, are closely related to *E. scoparium* Small of western Colorado. These three species all have similarly shaped leaves, but *E. humivagans* differs in its inflorescence which is more strict, and the branching pattern of the lower stems which are more spreading, and in various technical characteristics and features of the involucre and perianth parts. In many respects, the new species approaches *E. nudicaule* (Torr.) Small on northern New Mexico, but *E. nudicaule* has leaves that are considerably longer and narrower than in this group of species. Of the more technical features, *E. humivagans* may be distinguished by its larger flowers and in its more narrow involucre. The basal spreading pattern which is designated in the species name is not unique, but it is not found in the following new species.

***Eriogonum intermontanum*** Reveal, sp. nov. Herba perennis, 1.5–3 dm alta; laminae foliorum anguste lanceolatae, (2)3–5 cm longae, 2–4 mm latae, subtus albo-tomentosae, supra subglabrae vel floccosae et virides, petiolis 1–2 cm longis, tomentosis, basi expansa petioli 1–1.5 mm lati; caules glabri, 10–15 cm longi, bracteis 1–3 mm longis, extra glabris, intus arachnoido-pubescentis; inflorescentiae cymosa, 2–10 cm longae; involucre turbinato-campanulata, 2.5–3.5(4) mm longae, 2–3(4) mm latae, sessilia, extra glabri, intus sparsi tomentosa, 5–6-lobata, bracteolis linearis, 3–4.5 mm longis, pedicellis 2.5–4 mm longis, glabris; perianthia alba, costa virides vel rubella, 2–3 mm longa, extra glabra, intus minute glandulosa, segmentis similibus, obovatis; stamina 2.5–4 mm longa, filament basi pilosis, antheris 0.4–0.5 mm longis; achenia brunnea, 2.5–3 mm longa.

Herbaceous perennials from branched woody caudices, plants 1.5–3 dm high; leaves basal or sheathing up the stems less than 1 cm, leaf-blades (2)3–5 cm long, 2–4 mm wide, narrowly lanceolate, densely white-tomentose below, floccose to subglabrous and green above, the petioles 1–2 cm long, tomentose, the expanding petiole-bases 1–1.5 mm wide, tomentose within and without; stems slender, green and glabrous, erect,

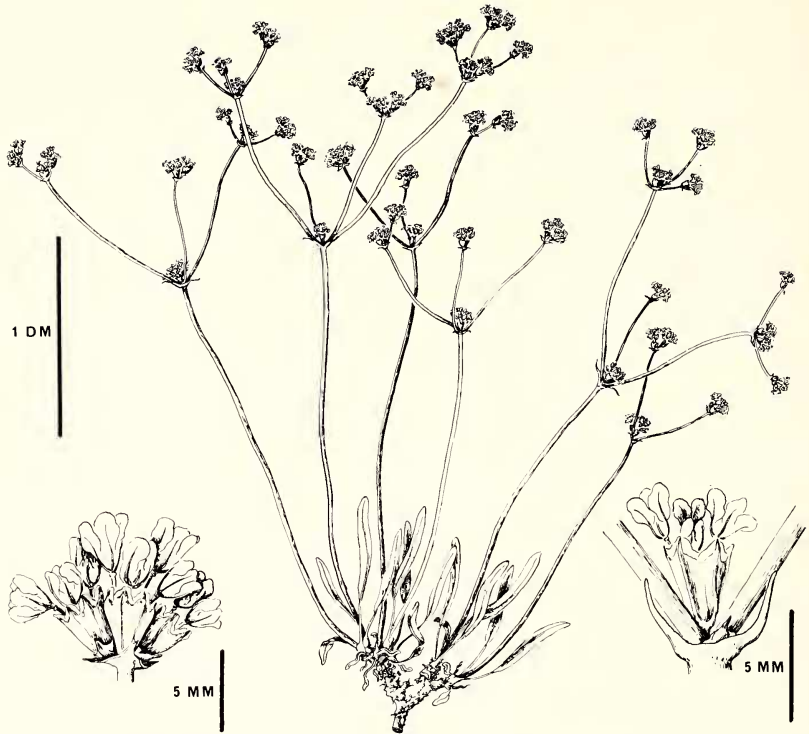


FIG. 3. *Eriogonum intermontanum*. Habit sketch showing the erect stems and arrangement of the basal leaves with an enlargement of an involucral cluster and exerted flowers, and a single involucre in the forks of the branches subtended by a ternate bract.

10–15 cm long; bracts scale-like, ternate, 1–3 mm long, narrowly triangular to linear, glabrous without, arachnoid-pubescent within, widening from acute apices to connate bases; inflorescences open, cymose, 2–10 cm long, trichotomously branched throughout, glabrous; involucre turbinate-campanulate, 2.5–3.5(4) mm long, 2–3(4) mm wide, sessile, 2–5 involucre per cluster, rarely only one, glabrous and reddish without, sparsely pubescent along the lobes within, angled with 5 or 6 distinct ribs running down from the acute teeth which form lobes ca.  $\frac{1}{4}$  of the length of the tubes, the bractlets linear, 3–4 mm long, densely hirsutulous with long marginal cells above, becoming short and capitate below, the pedicels 2.5–4 mm long, glabrous; perianth white with greenish, reddish, or reddish-brown midribs and perianth tubes, 2–3 mm long, glabrous except for minute gland-tipped hairs along the midribs within, calyx-segments similar, obovate, connate less than  $\frac{1}{4}$  their length; stamens excluded, 2.5–4 mm long, the filaments pilose at the bases, the anthers reddish-purple, 0.4–0.5 mm long; achenes brown, 2.5–3 mm long, the subglobose bases tapering to 3-angled beaks.

Specimens examined. Utah, Grand Co.: About 1.5 mi S of Uintah Co. line at head of Middle Canyon of West Water Creek drainage in Roan Cliffs, near a cattle pen, Sec 33, T15½S, R24E, 8,400 ft, *Holmgren, Reveal, & LaFrance* (holotype-UTC), July 27, 1965, distributed from UTC as *E. tristichum* Small; Roan Cliffs, *Despain* s. n. (BRY). Fig. 3.

*Eriogonum intermontanum* is probably most closely related to *E. scoparium* Small, but keys out to *E. tristichum* in Harrington's Manual (1954). However in reviewing type material, *E. tristichum* seems to be a synonym of *E. nudicaule* (Torr.) Small, but considerable field work is necessary to prove this. Nevertheless, the leaves of the new species are shorter than either. From *E. scoparium*, the new buckwheat differs in its larger stature and size of its various parts, in its more open inflorescence, and by having its involucre clustered, and only rarely singular as is the typical situation in related taxa. Ecologically *E. intermontanum* differs from these species. Normally members of this section occur on gumbo clay hills at elevations mostly below 7000 feet. However, this species occurs on gravelly loam soils above 8000 feet elevation where none of the related species occur. It is of some interest to note that the perianth and involucre are exceedingly similar to those of *E. panguicense* (M. E. Jones) Reveal of the section *Capitata* Torr. & Gray, of Southwestern Utah. However as the two do not belong to the same section, they are not believed to be closely related.

***Eriogonum ephedroides*** Reveal, sp. nov. Herba erecta, 2–3.5 dm alta; laminae foliorum lanceolatae, 1.5–2.5 cm longae, 2–3 mm latae, basiles, subtus albo-tomentosae, supra subglabrae vel glabrae et virides, petiolis 5–10 mm longis, basi expansa petioli 3–3.5 mm lati, extra glabra, intus tomentosa; caules glabri, basi excepta, ca. 2 dm longi, bracteis 1–4(7) mm longis; inflorescentiae cymosa, 1.5–2.5 dm longae, stricta, glabrae; pedunculi erecti, inferiores 5–15 mm longi, superiores perbreves; involucre turbinata, 2–2.5 mm longa, extra glabra, intus ± tomentosa, 5-lobata, bracteolis oblanceolatis, 2 mm longis, pedicellis 2–3 mm longis, glabris; perianthia citrea vel flava, 2–2.5 mm longa, extra glabra, intus minute glandulosa, segmentis similibus, lanceolatis; stamina 1.5–2 mm longa, filamentis basi pilosis, antheris 0.4–0.5 mm longis, oblongis, flavis; achaenia brunnea, 2 mm longa.

Erect herbaceous perennials from gnarled woody branching caudices, 2–3.5 dm high; leaves strictly basal, 1.5–2.5 cm long, 2–3 mm wide, lanceolate, not revolute, densely white-tomentose below, subglabrous to glabrous and green above, the petioles 5–10 mm long, expanding into membranaceous petiole-bases 3–3.5 mm wide, glabrous and tan to light brown without, tomentose within; stems glabrous and bright green, up to 2 dm long; bracts scale-like, ternate, 1–4(7) mm long, linear, the acute apices widening to connate bases; inflorescences narrowly cymose, strict, 1.5–2.5 dm long, trichotomously branched at the first node, dichotomous or trichotomous above; peduncles erect, stout, 5–15 mm long

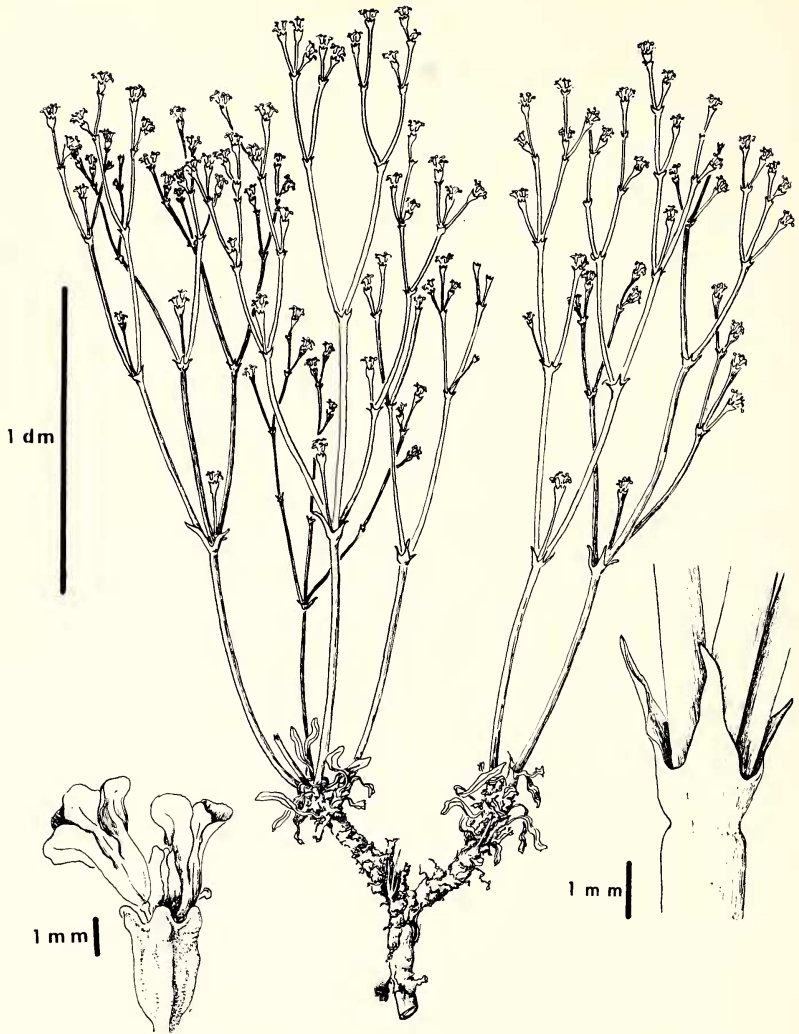


FIG. 4. *Eriogonum ephedroides*. Habit sketch showing the narrowly erect stems and arrangement of the basal leaves with an enlargement of a single involucre with exserted flowers and an enlarged section of the stem at the node showing the ternate bract.

below, becoming subsessile to sessile above; involucre turbinate, 2–2.5 mm long, glabrous without, sparsely pubescent within, the 5 acute lobes 0.5 mm long, the bractlets 2 mm long, oblanceolate, minutely gland-tipped along the margins, the pedicels 2–3 mm long, glabrous; perianth lemon-yellow to yellow, 2–2.5 mm long, glabrous except for minute glands along the midribs within, calyx-segments similar, lanceolate, con-



nate ca.  $\frac{1}{4}$  their length; stamens 1.5–2 mm long, the filaments pilose at the bases, the anthers 0.4–0.5 mm long, yellow; achenes brown, 2 mm long, the subglobose bases tapering to 3-angled beaks.

Specimens examined. Utah, Uintah Co.: About 10 mi S of Bonanza along Utah highway 45, on broken white shale slopes, S of White River, Sec 20, T10S, R25E, 5,600 ft, *Holmgren, Reveal, & LaFrance 2265* (holotype-UTC), July 25, 1965, distributed from UTC as *E. brevicaule* Nutt. var. *leptothecum* (S. Stokes) Reveal; White River, *Ripley & Barneby 8738* (CAS, NY); N of Dragon, *Ripley & Barneby 13161* (CAS, NY, RSA). Colorado, Rio Blanco Co.: 17 mi NW of Rangely, *Ripley & Barneby 8741* (NY). Fig. 4.

This new and distinctive species is a member of the *E. brevicaule* Nutt. complex, and is probably most closely related to *E. viridulum* Reveal. The narrow, strict inflorescence led the author (1966b) to consider this plant to be *E. brevicaule* var. *leptothecum*. However, during the summer of 1966 detailed herbarium studies were carried out on this species which were completed during an Internship at the United States National Herbarium. This new study allowed the author to review considerable material in the entire *E. brevicaule* complex, and this revealed the distinctiveness of *E. ephedroides*. While the new species does resemble var. *leptothecum* which is restricted to the Front Ranges of Colorado in stature, it differs in leaf size and shape, and in the arrangement appear racemose, and in the wider and nonrevolute leaves. Both species differs in its unique inflorescence which, upon a casual observation would appear racemose, and in the wider and nonrevolute leaves. Both of species grow in the same general area. However, *E. viridulum* is found north and west of the known sites of *E. ephedroides*.

The bright green and glabrous stems are not unique for the genus, yet they make *E. ephedroides* stand out against the light gray to white shale slopes upon which it grows. In the field, one notes the loosely compacted, woody, and gnarled root system. From this root, numerous branches arise, and this gives the plant the appearance of an inverted haystack, with the rounded part at the root, and the flat-topped part above.

The name for this new plant is selected for the striking resemblance it has with an associated species, *Ephedra torreyana* S. Wats., in its bright green stems and lemon-yellow flowers.

ERIOGONUM THOMPSONAE S. Wats., Amer. Naturalist 7:302. 1873. Herbaceous perennials from branched woody caudices, plants 2–4 dm high; leaves basal or sheathing up the stems less than 2 cm, leaf-blades (2)3–4.5(5) cm long, 8–15 mm wide, oblong to oblanceolate or elliptic, densely white-tomentose below, glabrous and green above, the petioles 3–7 cm long, tomentose, the expanding petiole-bases 3–4 mm wide, densely tomentose on both surfaces; stems green and glabrous, erect, 12–25 cm long; bracts scale-like, ternate, 2–5(7) mm long, linear, glabrous, the acute apices widening to connate bases; inflorescences open cymes, trichotomously divided at the first node, dichotomous or trichoto-



mous above; involucre sessile, turbinate, 2–3 (3.5) mm long, 1–1.5 (2) mm wide, green and glabrous without, white-glaucous and glabrous within, the 5 acute lobes ca. 0.5 mm long, the bractlets narrowly-oblongate, 2–3 mm long, the pedicels 3–4 mm long, glabrous; perianth yellow or white, 3–3.5 mm long, glabrous except for microscopic protuberences along the midribs within, calyx-segments similar, oblong to obovate, connate only at the base; stamens 2–4 mm long, the filaments sparsely pilose at the bases, the anthers 0.3–0.5 mm long, yellow; achenes light brown to brown, 2.5–3 mm long, the subglobose bases tapering to roughened 3-angled beaks. Fig. 5.

ERIOGONUM THOMPSONAE var. THOMPSONAE. Calyx yellow; involucre (2.5)3–3.5 mm long, 1–1.5 mm wide.  $n = 20$ .

Specimens examined. Utah, Kane Co.: Sandstone cliffs near Kanab, A. P. Thompson s. n., 1872 (BRY-photographs and illustrations, GH-holotype, NY!, UC-fragment!, US-fragment!); Kanab, Holmgren & Reveal 2993 (BRY, NY, UTC). Arizona, Mohave Co.: 9 mi W of Pipe Springs, Parker et al. 6242 (CAS, US).

ERIOGONUM THOMPSONAE var. **albiflorum** Reveal, var. nov. A var. *thompsonae* perianthiis albis differt. Calyx white; involucre 2–3 mm long, 1.5–2 mm wide.  $n = 20$ .

Specimens examined. Utah, Washington Co.: 3 mi W of Virgin, on basaltic gravelly soils associated with Larrea, Sec 19, T41S, R12W, 3,700 ft, Holmgren & Reveal 2991 (holotype-UTC), Aug. 11, 1966; 3.7 mi W of Virgin, Dress 4764 (GH).

The new collection of *E. thompsonae* var. *thompsonae* from Utah is the first one to have been made since the type was collected by Mrs. Thompson near Kanab in 1872. Except for the Arizona collection cited above, the species has been virtually unknown. With the discovery of what appeared to be a new variety of *E. thompsonae*, it became important that an attempt be made to relocate this seemingly rare plant. Following the label data, a brief search was made along the sandstone cliffs north of Kanab, but the species was not seen. However, along the hills northeast of Kanab, and near the local baseball diamond, *E. thompsonae* was found growing abundantly along the lower slopes of the red sandstone cliffs.

The minor distinction of flower color and involucre size which separates the two varieties are augmented by the distinct edaphic differences seen in the two type localities. At Kanab, var. *thompsonae* is restricted to the red sandstone, while the var. *albiflorum* is found on basaltic gravels near Virgin. In the field, the growth habit of var. *albiflorum* is more spreading than in var. *thompsonae* which tends to be more erect and not as dense in the crown.

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FIG. 5. *Eriogonum thompsonae*. Habit sketch showing the general aspect of the species.

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LITERATURE CITED

- CRONQUIST, A. 1963a. Two new varieties in *Machaeranthera*. *Leafl. W. Bot.* 10:11-13.  
 ———. 1963b. A new variety of *Hackelia patens* from Oregon. *Leafl. W. Bot.* 10:39-40.  
 ———. 1964. A new variety of *Penstemon davidsonii* from Nevada and Oregon. *Leafl. W. Bot.* 10:129-133.  
 HARRINGTON, H. D. 1954. *Manual of the plants of Colorado*. Sage Books, Denver.  
 HOLMGREN, N. H. 1967. A new species of Primrose from Nevada. *Madroño* 19:27-79.  
 REVEAL, J. L. 1965. A new alpine *Eriogonum* from Nevada. *Leafl. W. Bot.* 10:183-186.  
 ———. 1966a. On the specific distinction of *Eriogonum nutans* and *collinum*. *Madroño* 18:167-183.  
 ———. 1966b. Notes on three Utah *Eriogonum*s. *Proc. Utah Acad. Sci.* 42:287-292.  
 ———. 1966c. Notes on *Eriogonum*—I. *Leafl. W. Bot.* 10:334-335.  
 ———. 1967. A new name for a Utah *Lepidium*. *Great Basin Naturalist* 27:177-181.  
 ———. 1968a. Notes on *Eriogonum* IV. A revision of the *Eriogonum deflexum* complex. *Brittonia* 20:13-33.  
 ———. 1968b. Notes on *Eriogonum* V. A revision of the *Eriogonum corymbosum* complex. *Great Basin Naturalist* 27:183-229.  
 STOKES, S. G. 1936. *The genus Eriogonum*. San Francisco.

NOTES AND NEWS

THE SOUTHERN LIMIT OF *TAXUS BREVIFOLIA* IN THE SIERRA NEVADA, CALIFORNIA—Current manuals describe the southern limit of distribution of *Taxus brevifolia* Nutt. in the Sierra Nevada as Tulare County. A recent search of herbaria (A, CAS, DS, GH, Herbarium of Fresno State College, JEPS, POM, RSA, UC, US, USFS, and USNA) and field studies have failed to turn up any locality south of Calaveras Co., 150 miles to the north. A collection from Yosemite Valley in 1874 (*Lemmon, DS, US*) appears to represent an erroneous record in view of the lack of more recent collections from Yosemite and the careless manner in which the Lemmon Herbarium was handled, and thus this record has been disregarded.

Earliest mention of Tulare Co. as the southern limit of *T. brevifolia* in the Sierra Nevada goes back to C. S. Sargent's *Silva of North America* (10:65. 1896). Twelve years earlier in his *Report on the Forests of North America*. (Department of the Interior. Washington, D. C. 1884), Sargent had described the distribution as "Sierra Nevada to about 37°N," or central Fresno Co. In view of the evidence presently available it seems plausible that these early reports of *Taxus* from southern Sierran counties are attributable to errors in collection records or field misidentifications, possibly of *Torreya californica* Torr. The southernmost occurrence of *T. brevifolia* in the Sierra Nevada is now considered to be Calaveras Co. (North Grove, Calaveras Big Trees State Park, 4800 ft., *Rundel 1887, DUKE*).—P. W. RUNDEL, Department of Botany, Duke University, Durham, North Carolina.